

CLAIMS:

1. A mobile communication terminal comprising a wireless signal transceiver for receiving and transmitting
5 wireless signals, a pressure sensor for measuring atmospheric pressure, processing means for determining from the measured atmospheric pressure the altitude of the communication terminal, means for determining the horizontal position at the location of the mobile
10 communication terminal, and means for determining the ground level at said location using said determined horizontal position.
2. A mobile communication terminal according to claim 1,
15 characterized by comprising means for calibrating the processing means using the pressure measured at said location and the determined ground level at said location.
- 20 3. A mobile communication terminal according to claim 1 or 2, characterized in that said means for determining the ground level using stored data correlating the horizontal position to a ground level.
- 25 4. A mobile communication terminal according to claim 3, characterized in that said data is stored in the mobile communication terminal.
5. A mobile communication terminal according to claim 3,
30 characterized in that said data is stored at a service provider with which said mobile communication terminal can communicate.
6. A mobile communication terminal according to claim 3,
35 characterized by comprising means to receive a wireless signal incorporating ground level data.

7. A mobile communication terminal according to claim 3,
characterized in that said means for determining the
horizontal position of the location of the mobile
communication terminal comprises means for enabling a
5 user to enter said horizontal position as a longitude and
latitude.

8. A mobile communication terminal according to claim 7,
10 characterized by comprising means for enabling a user to
enter said horizontal position by indicating an area, a
town, a street address, a postal code, or a landmark.

9. A mobile communication terminal according to claim 8,
15 characterized by comprising means for displaying a map
corresponding to an area around a rough horizontal
position indication entered by the user, and means
enabling the user to indicate a more exact horizontal
position on said map.

20 10. A mobile communication terminal according to claim 9,
characterized in that said mobile communication terminal
is provided with means for receiving a wireless signal
incorporating geographical data for displaying said map.

25 11. A mobile communication terminal according to claim
10, characterized by comprising means for transmitting a
wireless signal containing horizontal position data.

30 12. A mobile communication terminal according to any of
claims 1 to 11, characterized in that said mobile
communication terminal is a cellular phone, comprising
means for determining its horizontal position through
signals from base stations of the cellular network by
35 using
- cell of origin (COO) and/or

- time of arrival (TOA) and/or
- time difference of arrival (TDOA) and/or
- enhanced observed time difference (E-OTD).

5 13. A mobile communication terminal according to any of claims 1 to 12, characterized in that said means for determining said horizontal position of the location of the mobile communication terminal uses signals received from orbital satellites.

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14. A mobile communication terminal according to any of claims 1 to 13, characterized in that said mobile communication terminal comprises means to store a number of altitude levels determined by said processing means,
15 and means for displaying a graphical histogram of the altitude development over time or relative to the traveled route.

15. A mobile communication terminal according to any of
20 claims 1 to 13, characterized in that said mobile communication terminal comprises means to receive an altitude profile.

16. Method of calibrating a barometric altimeter of a
25 mobile communication terminal, comprising the steps of

- determining the horizontal position at the location of the mobile communication terminal,
- determining the ground level at said location using the determined horizontal position,
- 30 - measuring the atmospheric pressure at the location of the mobile communication terminal and
- using the determined ground level to calibrate said barometric altimeter.

17. Method according to claim 16, further comprising the step of retrieving said ground level from stored data correlating ground levels to a horizontal position.

5 18. Method according to claim 16 or 17, further comprising the step of sending a wireless signal incorporating a request for receiving a ground level at a horizontal position.

10 19. Method according to any of claims 16 to 18, further comprising the step of sending a wireless signal incorporating a ground level to said mobile communication terminal.

15 20. Method according to any of claims 16 to 19, further comprising the steps of;

- enabling the user to enter a horizontal position manually as an area, street address, postal code or landmark,
- 20 - comparing the manually entered horizontal position with said stored data,
- requesting the user to enter further detail regarding the horizontal position when the horizontal position is not sufficiently accurate for retrieving an
- 25 altitude from said stored data,
- and providing the determined ground level when said manually entered horizontal position is sufficiently accurate for retrieving a ground level from said stored data.

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21. Method according to claim 20, further comprising the steps of displaying on a display of said mobile communication terminal a map of the area in which the mobile is located, and allowing the user to enter a

35 horizontal position by indicating a location on said map.

22. Method according to claim 20 or 21, further comprising the step of transmitting a wireless signal incorporating the manually entered horizontal position to a service provider.

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23. Method according to any of claims 20 to 22, further comprising the step transmitting a wireless signal incorporating a ground level altitude or incorporating an indication that the provided horizontal position is not
10 sufficiently accurate to determine a ground level.

24. Method of determining the altitude of a mobile communication terminal, comprising the steps of

- establishing the horizontal position of the mobile
15 communication terminal, and
- determining the ground level at said horizontal position.

25. Method according to claim 24, further comprising the
20 step of retrieving said ground level from stored data correlating ground levels to a horizontal positions.

26. Method according to claim 24 or 25, further comprising the step of sending a wireless signal
25 incorporating a request for receiving a ground level at a horizontal position.

27. Method according to any of claims 24 to 26, further comprising the step of sending a wireless signal
30 incorporating a ground level to said mobile communication terminal.

28. Method according to any of claims 24 to 27, further comprising the steps of

- enabling the user to enter a horizontal position manually as an area, street address, postal code or landmark,
- comparing the manually entered horizontal position with said stored data,
- requesting the user to enter further detail regarding the horizontal position when the horizontal position is not sufficiently accurate for retrieving an altitude from said stored data,
- and providing the determined ground level when said manually entered horizontal position is sufficiently accurate for retrieving a ground level from said stored data.

29. Method according to claim 28, further comprising the steps of displaying on a display of said mobile communication terminal a map of the area in which the mobile is located, and allowing the user to enter a horizontal position by indicating a location on said map.

30. Method according to claim 28 or 29, further comprising the step of transmitting a wireless signal incorporating the manually entered horizontal position to a service provider.

31. Method according to any of claims 28 to 30, further comprising the step transmitting a wireless signal incorporating a ground level altitude or incorporating an indication that the provided horizontal position is not sufficiently accurate to determine a ground level.